

September 2002

Safety Smarts

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- Illegal Disposal

September Training:

- Haz Comm – 10/17
- PPE – 10/24
- 8-Hour Update 10/17

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August 2002 Injuries

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Lost Time	1

Hazardous Chemical Storage

Hazardous chemicals are substances that have specific properties that can cause injuries, fires and explosions if not handled correctly.

Hazardous chemicals are used in virtually every department in the City and can be found in most households. Problems with hazardous chemicals occur when they are stored or used incorrectly.

Improper storage can have a disastrous outcome, resulting in

property damage, personal injury and costly clean-ups.



Mixing of incompatible chemicals can have the same devastating results. Common household chemicals when mixed together will generate

deadly atmospheres. The National Safety Council reported recently on a fatal accident involving a homemaker who decided the toilet bowl cleaner was not working fast enough, and added some bleach. The result was a deadly mix that ended in a fatality.

Accidents involving hazardous chemicals typically result from failing to read and follow the instructions found on the Material Data Safety Sheet (MSDS) or product warning labels.

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Chemical Spills

A spilled chemical is a chemical "out of control". The quantity of the spilled chemical is not important, the specific chemical hazard, the location and occupancy are very important.

Many on the job injuries occur when an employee attempts to clean up a small spill. That's why OSHA requires employers to train employees on hazards anytime hazardous chemicals are introduced into the workplace. This is called the "Employee-Right-to-Know" or Hazard

Communication. The City of Tempe offers a hazardous communication class, which trains employees on specific chemical hazards in their workplace. In this class employees are taught basic response techniques. The most important thing you should remember with any spill is protecting "you"!

If you are not trained or if the spill is greater than your abilities, get help. Every hazardous chemical in the City has a Material Data Safety Sheet (MSDS). This provides

key information on measures to be taken in the event of a spill. It also provides detailed information on personal protective equipment.

That is why it is so important to read the MSDS prior to *opening* any chemical package.



Spills - continued on page 2

"When an emergency happens, it's too late to read the MSDS and too late to plan."



Spills *(Continued from page 1)*

Never attempt to clean up a chemical spill if you are not trained to do so.

What Do You Do

First do not panic. Assess or size up the spill and determine its immediate impact. Alert others in the area of the spill in case an evacuation becomes necessary. Anytime a flammable substance is spilled indoors, evacuate and dial 911. If safe to do so protect sewer and storm drains.

What Not To Do

Take any action you are not trained to take. This can cause injury to you and others.

Many times individuals who have received "First Responder" training attempt to take actions and injure themselves. Remember that Hazardous Materials Teams train regularly and even more importantly have the knowledge and personal protective

equipment to handle a chemical spill. The best thing you can do is become familiar with the MSDS and establish an emergency plan. When an emergency happens, it's too late to read the MSDS and too late to plan.

For information on scheduling a Hazard Communication Class contact Cora Lofgren (480) 350-8350.

Safety Tidbits

Safety Acronyms

APR – Air Purifying Respirator.

Ceiling Limit (C) – Airborne concentration of a toxic substance, which should never be exceeded.

IDLH – Immediately Dangerous to Life and Health.

NFPA – National Fire Protection Association.

NIOSH – National Institute for Occupational Safety and Health.

OSHA – Occupational Safety and Health Administration.

PEL – Permissible exposure limit.

PPE – Personal Protective Equipment.

TLV-TWA – Threshold Limit Value – Time Weighted Average.

Safety Inspections

The City Safety Team will be instituting monthly inspections of fire extinguisher, exit signs and emergency lighting at City facilities. If you would like to participate, please contact your City Safety Team representative.

City Safety Award

Know of an employee or work group that exemplifies safety nominate them for a City Safety Award. Contact Cora Lofgren 350-8321.

Need a Gas Detector

The Water Utilities Department has MSA gas meters that may be signed out upon request, once you have received proper training.

If you need training or more information, telephone the Household Products Collection Center 858-2223.

Tetanus Reminder

Do you know when your last tetanus shot was? If not, you may want to contact your family physician and discuss the need of getting a booster shot.

Ice Machines

If you have questions concerning City ice machines contact Scott Mosley 350-8877.

West Nile Virus

For information on the West Nile virus contact the Arizona Department of Health Services 602-230-5932 or visit their web site at:

http://www.hs.state.az.us/phs/oids/vector/wnv_surv.htm



Storage *(Continued from page 1)*



On every MSDS or product warning label there is always information on proper use and storage.

Depending on the quantity stored on-site, or types of chemicals stored, this may determine if federal, state and local regulations apply. Even if your work site is not covered by a regulation, common sense dictates that storage requirements be followed. There are two particularly dangerous types of storage that have been discovered within the City of Tempe.

Random Storage

This involves storing chemicals with no regard to compatibility. Acids may be stored next to bases, oxidizers next to flammables or water reactive chemicals next to sinks. The result of this type of storage is an explosive accident waiting to happen.

Alphabetical Storage

This is the most common type of storage method. It is also the most dangerous. As with random storage there is no concern of compatibility issues, the results can be deadly.



Other Dangers

Here are some other dangers created when chemicals are stored incorrectly:

- Flammable chemicals stored in domestic refrigerators.
- Storing chemicals on shelves above eye level.
- Chemicals stored on floor.
- Out of date chemicals. This is extremely dangerous, never open a container that has visible crystals under the lid or on the outside of the lid.
- Lids or caps of containers missing or badly damaged.
- Open chemical containers left unattended.
- Leaking containers.
- Containers not properly labeled.

Proper Storage

The simplest method to determine proper chemical storage is simple, read the Material Data Safety Sheet. If your work area uses numerous chemicals and you need assistance, telephone the Household Products Collection Center 858-2223. Here are some

suggestions regarding chemical storage:

- When ordering hazardous chemicals, bigger is not better. Order smaller amounts to avoid long term storage problems.
- Mark containers with date you received them.
- Be careful storing chemicals by classification. The term corrosive includes both acid and bases and they are incompatible.
- Inspect chemical areas regularly. Look for changes in the color of the chemical, leaks and damage/deterioration of containers.
- If chemicals must be stored outside, provide protection from the.

If you need assistance or would like someone to assess your chemical storage area, telephone Laura Guerrero 350-2916 or the Household Products Collection Center 858-2223.



Risk Management

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This newsletter is intended to be a supplement to "in-house" safety training. For questions or comments concerning this publication, contact Raymond Hagen or David Tavares

Portable Gas Detectors - Testing Rick Hartman, William Berner MSA®

In the past, there has often been confusion regarding proper calibration procedures and frequency. To clarify this issue, the International Safety Equipment Association (ISEA) has issued a position statement on instrument calibration for use in confined spaces. According to this document, "a bump test or full calibration of direct-reading portable gas monitors should be made **before each day's use** in accordance with manufactures instructions, using an appropriate test gas". If the instrument fails the bump test, it must be adjusted through a full calibration before it is

used. ISEA recommends more frequent testing if sensor contaminants may be present.

In their calibration statement, ISEA allows for less frequent calibration verification under certain conditions. However, the time interval between checks should never exceed 30-days.

If conditions do not permit daily testing to verify calibration, less frequent verification may be appropriate if the following criteria are met:

During a period of initial use of at least 10-days in the intended atmosphere, calibration is verified daily to be sure there is nothing in

the atmosphere that is poisoning the sensor(s). The period of initial use must be of sufficient duration to ensure that the sensors are exposed to all conditions that might have an adverse effect on the sensors.

If the tests demonstrate that it is not necessary to make adjustments, then the time interval between checks may be lengthened but should not exceed 30-days.

For questions regarding portable gas detectors telephone the Household Products Collection Center 858-2223.

Fatal Fact U.S. Department of Labor Occupational Safety and Health Administration

ACCIDENT SUMMARY

Accident Type	Asphyxiation
Weather	Warm
Type of Operation	Boring/Jacking
Crew Size	Six
Collective Bargaining	No
Competent Safety Monitor on Site?	No
Safety and Health program in Effect?	No
Workplace Inspected Regularly?	No
Training and Education Provided?	No
Employee Job Title	Laborer
Age/Sex	23/M
Experience at this Type of Work	1 day
Time on Project	1 hour

Brief Description of Accident

An employee sitting in a looped chain was lowered approximately 17 feet into a 21-foot deep manhole. Twenty seconds later he started gasping for air and fell from the chain seat face down into the accumulated water at the bottom of the manhole. An autopsy determined oxygen deficiency as the cause of death.

Accident Prevention Recommendations

Instruct employees to recognize and avoid unsafe conditions associated with their work environment (29 CFR 1926.21(b)(2). Instruct employees on hazards involved in entering confined or enclosed spaces (29 CFR 1926.21(b)(6)(i) and (b)(6)(ii). Provide and require employees to use appropriate respiratory protection (29 CFR 1926.103(a)(1) and 1910.134)

